## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/016489

|   |   | .004/01030             |
|---|---|------------------------|
| A. CLASSIFICATION OF SUBJECT MATTER Int.Cl <sup>7</sup> Gl0L15/28   |   |                        |
| According to International Patent Classification (IPC) or to both nation  | nal classification and IPC  |                        |
| B. FIELDS SEARCHED  |   |                        |
| Minimum documentation searched (classification system followed by Int.Cl <sup>7</sup> G10L15/28, H04N5/232, H04N5/  | classification symbols) /225  |                        |
|   | Jitsuyo Shinan Toroku Koho<br>Yoroku Jitsuyo Shinan Koho  | 1996-2004<br>1994-2004 |
| JTSPlus FILE(JOIS)  |   | ,                      |
| C. DOCUMENTS CONSIDERED TO BE RELEVANT  |   |                        |
| Category* Citation of document, with indication, where a  |   | Relevant to claim No.  |
| Y JP 2-146600 A (Nippondenso of Une, 1990 (05.06.90), Full text; all drawings (Family: none)  | Co., Ltd.),   | 1-4                    |
| Y JP 4-299410 A (Nippon Telegrate Telephone Corp.), 22 October, 1992 (22.10.92), Full text; all drawings (Family: none)   | raph And  | 1-6                    |
| Y JP 2000-200095 A (NEC Saitar<br>18 July, 2000 (18.07.00),<br>Full text; all drawings<br>(Family: none)  | na, Ltd.),  | 1-4                    |
| X Further documents are listed in the continuation of Box C.  | See patent farmily annex.   |                        |
| Special categories of cited documents:     document defining the general state of the art which is not considered to be of particular relevance     earlier application or patent but published on or after the international filing date  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed | "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family |                        |
| Date of the actual completion of the international search   | Date of mailing of the international searc  | h report               |
| 31 January, 2005 (31.01.05)   | 15 February, 2005 (1  | ±3.02.05)              |
| Name and mailing address of the ISA Japanese Patent Office  | Authorized officer  |                        |
| Facsimile No. Form PCT/ISA/210 (second sheet) (January 2004)  | Telephone No.   |                        |

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| Category* | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No |
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| Y         | <pre>JP 2002-318597 A (Alpine Electronics, Inc.), 31 October, 2002 (31.10.02), Full text; all drawings &amp; US 2002/0120455 A1</pre>                      | 5,6                  |
| Y         | JP 9-149157 A (Casio Computer Co., Ltd.),<br>06 June, 1997 (06.06.97),<br>Full text; all drawings<br>& WO 1997/019401 A1 & US 5930372 A<br>& EP 0807286 A1 | 7,8                  |
| Y         | JP 2003-114697 A (Alpine Electronics, Inc.), 18 April, 2003 (18.04.03), Full text; all drawings (Family: none)   | 7,8                  |
| A         | JP 2003-295899 A (Fujitsu Ltd.),<br>15 October, 2003 (15.10.03),<br>Full text; all drawings<br>& US 2003/0187640 A1 & EP 001349149 A2                      | 1-8                  |
| A         | JP 9-204290 A (NEC Corp.),<br>05 August, 1997 (05.08.97),<br>Full text; all drawings<br>(Family: none)   | 1-8                  |
| A         | JP 2-232697 A (Nippondenso Co., Ltd.),<br>14 September, 1990 (14.09.90),<br>Full text; all drawings<br>(Family: none)                                      | 1-8                  |
| A         | JP 2-254499 A (Aisin Seiki Co., Ltd.), 15 October, 1990 (15.10.90), Full text; all drawings (Family: none)   | 1-8                  |
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